PHILIPPINE OIL DEVELOPMENT COMPANY, INC.

MANILA—PHILIPPINES

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ANNUAL REPORT
FOR 1952

PHILIPPINE OIL DEVELOPMENT CO., INC.

REPORT OF THE PRESIDENT FOR 1952

TO THE STOCKHOLDERS:

Since our last annual meeting we have made two more attempts to discover a commercial oil field in the Philippines: one on the Bondoc Peninsula with funds advanced by your General Managers and the other on Panay under the agreement between your Company and the Philippine-American Drilling Company, the partnership formed by my two sons and myself. Unfortunately, these drilling operations have not met with any more success than our previous efforts. Especially disappointing was the result of our drilling on Panay where the structure was ideal and the formations adequate in porosity — but yielding no commercial quantity of oil or gas.

In addition to the following report on our drilling operations, we attach reports by Mr. E. F. Richards, President of the Kern Drilling Corporation of Long Beach, California, and Mr. Benjamin Daleon, our paleontologist, with reference to the Panay operation. Also included is a report from the Petroleum Technologists, Inc. of Montebello, California, regarding the analysis performed on three of the core samples from our hole in Panay.

OPERATIONS

BONDOC DRILLING

Drilling of Bondoc Well No. 4, using a cable tool rig, commenced January 18th 1952. Progress of drilling — comparatively slow when a cable tool rig is used — was delayed by mechanical difficulties, principally with respect to casing. In the course of the drilling, gas showings with some traces of oil were observed at 157 feet, and at from 340 to 450 feet.

On March 9th, after the hole had reached a depth of 450 feet and while welding the casing, a flow of gas set the hole on fire. The fire was brought under control and extinguished after burning for about half an hour. As a result of the fire, both the eight-inch and six-inch casings in the hole parted, and it was necessary to pull them out. The upper section was recovered easily, but "fishing" out the lower portion presented a serious problem.

After careful consideration, the Management decided to start a new hole in the vicinity of the hole which had caught fire, using a small rotary drill to speed up drilling of the hole from the surface to the objective; thereafter, changing to a cable tool rig. Accordingly, a Failing portable rotary rig was obtained on lease.

Moving operations and installation of the rotary rig as well as haulage of equipment and supplies to the new location occupied the period from April 4th to May 7th. Drilling of the second hole, Bondoc No. 5, started on May 8th and reached a depth of 458 feet in the morning of May 24th, the drill having penetrated the fault at this depth. On hitting the fault, the hole started to cave in at a point 230 feet above bottom and it was necessary to come out of the hole and go back into the caving area with other tools and start cleaning. At this juncture, however, the mud pump and hydraulic system of the rig broke down and it was not possible to attempt to control the caving.

Since we were still at the stage where the hole was shallow and it was, therefore, more economical to start a new hole than to try to overcome the caving problem, the Management decided to drill a fresh hole approximately 500 feet north.

On June 18th, after new parts for the rig were obtained from the United States, the third hole (Bondoc No. 6) was spudded and drilling continued uninterrupted until reaching a depth of 380 feet on June 26th.

At this depth, the drill stem was pulled out to change bit and while going back into the hole with a new bit, a bridge was encountered at 150 feet caused by the caving of a limestone stringer at 130. This bridge was cleaned out, however, and immediate plans were made to run 12" casing past this area to protect the upper hole.

While rigging up the cable tool to run this casing, additional hole was made with the rotary and a depth of 450 feet reached on the night of June 27th. As in the previous holes, showings of oil and gas were encountered at this depth. Driving of the 12" casing was started the next day but this proved to be difficult and the casing could not be driven beyond 115 feet. Steps were taken immediately, therefore, to run 9-5/8" casing to bottom for which the rotary was rigged back to clean the hole. Unfortunately, the bottom section of the hole started to cave in also and although three attempts were made to clean out to bottom, it was not possible to control the heaving shale long enough to set casing.

In view of the recurrence of caving trouble in all the holes drilled, it was decided to suspend drilling operations in Bondoc.

It will be recalled that our drilling operations in this area in 1948 and 1949 were also handicapped by caving shale.

MAGNETOMETER SURVEYS

Mr. James E. Dick, a highly competent technician from California, was engaged by the Philippine-American Drilling Co., at its expense, to run magnetometer surveys on your leases. During the period from January to June, 1952, he carried out surveys in Tarlac, Pangasinan, Bondoc, Cebu, Leyte, Panay, and the Turtle Islands. The most interesting results were obtained in the Iloilo basin, where the existence of three geological structures favorable to the accumulation of oil was confirmed. The Philippine-American Drilling Company selected one of these structures, near the Municipality of Oton, to drill a hole.

PANAY DRILLING

The drilling rig and equipment of the Philippine-American Drilling Company, which had been in storage at Cebu, were transferred to Iloilo during the months of October and November. Additional drilling supplies were brought in from the United States. A 4-1/2 kilometer road had to be constructed to reach the location at Oton. This road was completed on December 31, 1952, and moving of the drilling equipment into location and rigging up at site was started on January 1, 1953.

The Kern Drilling Corporation of Long Beach, California, was again contracted to provide the drillers and direct the drilling, and Mr. E. F. Richards, President of said corporation, arrived in the Philippines to supervise the operations.

Drilling of the hole began on January 20th. The drill passed into the Ulian Mudstone formation at 201 feet. Surface casing was cemented at 206 feet on January 21st and drilling resumed on January 23rd after the cement had set properly and the Blowout Preventer was installed. We passed from the Ulian Mudstone into the Iday Conglomerate formation at 1220 feet, and the first batch of core samples was taken with the HOMCO sidewall sampler working upward from 2000 feet to 1000 feet.

Drilling, alternated with coring, continued uninterrupted till we reached a depth of

5310 feet. At 2240 the drill passed from the Iday Conglomerate into the Tarao formation, and at 4179 from the Tarao into the Singit formation. Gas showings were observed in the cores at close intervals from 3926 down to 5310 feet. Oil showings were also observed in the ditch while drilling at 4540, 4830, and 5030.

On February 11th, while drilling at 5310 feet, the Pump Engine and Power Take-off broke down and it was necessary to make repairs. These repairs took a period of eight days, and drilling was resumed on February 19th. Gas showings continued to be in evidence down to 6340, but no additional oil showings were observed.

A depth of 6354 ft. was reached on February 22nd. On coring back to 6200 feet, some caving occurred, and in cleaning out the shale and gravel, the drilling mud was reconditioned. On February 25th, after lowering the coring tool to resume the sampling, a strong flow of salt water entered the hole and it took 850 sacks of baroid to put the flow under control. This depleted our stock of baroid to where it was questionable if we could keep the salt water flow under control should it again occur.

The decision of whether to continue drilling or not had to be seriously considered, for if salt water should flow beyond control into the nearby irrigation ponds, it would cause considerable damage to the surrounding rice fields. In weighing this problem, a determining factor was the evidence of basalt in the ditch samples from the bottom of the hole indicating that we were close to basement, i. e., the end of the sedimentary section. It was, therefore, reasonable to assume that we could evaluate the possibilities of the structure on the basis of the core samples and showings reported above. While these had occurred frequently, giving rise to some encouragement, they were not impressive enough to indicate a commercial deposit. Three of the cores were sent to the Petroleum Technologists, Inc., of Montebello, California, for analysis. The result showed an oil content of only one percent of the pore space. It was, therefore, decided to abandon the hole and plug it so as to avoid causing damage to the surrounding agricultural area. This was done on the 26th of February, following which, we started work on removing the drilling equipment from the location.

As from a geological standpoint the structure drilled was highly favorable for the accumulation of oil, being a domal anticline with a complete closure, and the formations penetrated had sufficient porosity to allow the migration of oil, the reasonable conclusion is that a commercial deposit of petroleum or gas is absent from the area. In view of this, we cannot see justification in drilling the two other structures in the Iloilo basin.

LEASES AND LEASE APPLICATIONS

Your Company holds three drilling leases and one exploration concession, and has pending applications for exploration concessions covering fourteen additional areas. The particulars are as follows:

PETROLEUM DRILLING LEASES

No. 62	San Andres, Bondoc	339 hectares
No. 68	" " "	6,257 "
No. 69	Daanbantayan, Cebu	12,769 "

As Lease No. 62 was to expire on March 1, 1953, an application for its extension for an additional period of five years was filed prior to the expiration date. A similar application has been filed with respect to Lease No. 69 which is due to expire on April 20, 1953.

PETROLEUM EXPLORATION CONCESSION

No. 2	Iloilo, Panay	71,939 hectares

This Concession was granted by the Bureau of Mines on October 29, 1952. We surrendered Concession No. 1 covering 99,895 hectares near Macabebe, Pampanga, on June 11, 1952 as this area, when drilled in 1950, showed no evidence of containing a commercial accumulation of oil or gas.

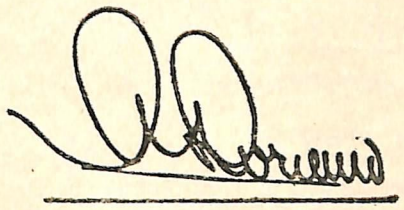
EXPLORATION CONCESSION APPLICATIONS

No. 2	Calubian, Leyte	20,688 hectares
" 5	San Fernando, La Union	32,680 "
" 6	Barili, Cebu	20,437 "
" 7	Bogo, "	20,380 "
" 8	Alegria, "	22,222 "
" 10	Moncada, Tarlac	75,000 "
" 11	Dagupan, Pangasinan	90,000 "
" 12	Pampanga-Nueva Ecija	95,257 "
" 16	Tubbataha Reefs	33,300 "
" 19	Bondoc, Quezon	70,000 "
" 21	Tarlac-Nueva Ecija	85,000 "
" 22	Isabela-Kalinga	87,700 "
" 23	Cagayan-Kalinga	94,800 "
" 25	Santiago, Isabela	29,356 "

FINANCIAL

Attached to this report is a Balance Sheet, certified by Messrs. Fleming & Williamson, showing the position of your Company at the end of 1952.

The Capital account shows an increase of ₱785,620.40 over the previous year. Of this amount ₱761,471.20 represents shares which were issued at par to your General Managers in settlement of cash advances made by them to finance drilling operations. The balance of ₱24,149.20 was subscribed by other stockholders. As of December 31st 1952 there remained a liability of ₱50,259.37 in favor of your General Managers.



ANDRES SORIANO
President

PHILIPPINE OIL DEV

BALANC

As at 31st D

ASSETS

CASH ON HAND AND IN BANK

Cash Funds	₱ 4,820.31	
Bank of America — Manila	232.14	₱ 5,052.45

ACCOUNTS RECEIVABLE — 1,907.95

INVENTORY

Bodega Supplies	9,010.62

FIXED ASSETS

	COST	DEPRECIATION	NET	
Machinery & Equipment	₱ 9,197.39	₱ 1,695.80	₱ 7,501.59	
Furniture & Fixtures	2,700.41	259.04	2,441.37	
	₱ 11,897.80	₱ 1,954.84	₱ 9,942.96	
Tool Room			1,209.20	11,152.16

DEVELOPMENT ACCOUNTS

Cebu Projects:			
Medellin Project No. 1 — Pre-War	₱ 975,755.27		
Medellin Project No. 2	985,257.97		
Daan Bantayan Project No. 3	649,693.07		
Daan Bantayan Project No. 4	1,019,360.39	₱ 3,630,066.70	
Quezon Projects:			
Bondoc Project No. 1	₱ 1,422,772.03		
Bondoc Project No. 2	227,025.49	1,649,797.52	
Pampanga Projects:			
Macabebe Project No. 1	₱ 96,998.46		
Minalin Project No. 1	87,396.19	184,394.65	
Panay Project — Oton		3,596.95	5,467,855.82

GEOPHYSICAL SURVEY EXPENSES — 266,887.42

INVESTMENT — Philippine International Fair Inc. — 100.00

DEFERRED CHARGES

General Expenses	₱ 631,781.33	
Lease Application Fees	4,000.00	635,781.33
		₱ 6,397,747.75

ELOPMENT CO., INC.

E SHEET

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LIABILITIES

ACCOUNTS PAYABLE

Pre-War	₱ 14,764.18	
Miscellaneous Accounts — Current	2,257.59	
Withholding Tax on Salaries	102.70	
A. Soriano y Cia. — Note 1	50,259.37	₱ 67,383.84

SUBSCRIBERS' DEPOSITS — On proposed Capital Increase to be refunded 959.90

CAPITAL AND SURPLUS

Authorized — 60,000,000 shares at ₱0.10 par value — Note 2.

Issued — 56,433,956 shares		₱ 5,643,395.60	
Subscribed — 115,916 shares	₱ 11,591.60		
Less — Subscriptions Receivable	5,700.10	5,891.50	
		₱ 5,649,287.10	
Capital Surplus			
Premium on Sales of Stock		858,429.85	
		₱ 6,507,716.95	
Less — Treasury Stock — 1,633,188 shares		178,312.94	6,329,404.01
			₱ 6,397,747.75

PHILIPPINE OIL DEVELOPMENT CO., INC.

NOTES TO FINANCIAL STATEMENT

NOTE 1

On 31st January 1952, machinery, equipment and bodega supplies having a net book value of ₱586,413.73 were transferred to A. Soriano y Cia. at the net book value in partial settlement of the outstanding liability to them. On the same date, there was issued 5,364,712 shares of Common Stock at a par value of ₱0.10 per share, totalling ₱536,471.20, in complete settlement of the amount due A. Soriano y Cia. as of 12th December 1951. On 25th August 1952 there was issued 2,250,000 shares of Common Stock at a par value of ₱0.10 per share, totalling ₱225,000.00 in partial settlement of the outstanding liability to A. Soriano y Cia. as of 31st July 1953. These transactions were all in accordance with the resolutions adopted by the stockholders at special meetings held on 12th December 1951 and 21st August 1952.

NOTE 2

Capital Stock having a par value of ₱18,040.40 has been reserved for payment of promotion fees on the first ₱1,000,000.00 of authorized capital stock to be issued only upon approval of the Securities and Exchange Commission.

FLEMING & WILLIAMSON

CERTIFIED PUBLIC ACCOUNTANTS

MANILA

The President and Board of Directors
Philippine Oil Development Co., Inc.

We have examined the Balance Sheet of the Philippine Oil Development Co., Inc. as at 31st December 1952. Our examination was made in accordance with generally accepted auditing standards and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances, except that our examination did not include visiting the drilling site nor physical verification of Bodega supplies.

Drilling Operations at Bondoc commenced in December 1951 were terminated in July 1952.

In our opinion, subject to the limitation in our audit procedures, the attached Balance Sheet, together with the Notes thereon, presents fairly the position of the Philippine Oil Development Co., Inc. as at 31st December 1952 in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

(SGD.) FLEMING & WILLIAMSON

Manila, 3rd March 1953.

SUMMARY OF DRILLING OPERATIONS ON A GEOLOGICAL STRUCTURE NEAR THE MUNICIPALITY OF OTON, ISLAND OF PANAY

Dec. 24, 1952. The road was completed to location, and sand material for Derrick legs and Machinery foundation was started in on December 26th.

Jan. 1, 1953. The erection of the derrick was started and completed January 5th. Seven days were consumed in transporting drilling machinery and another eight days in installing same, making a total of 20 days for erecting derrick, hauling and rigging up drilling machinery.

The well was spudded on January 20th with a re-run 18" bit, and this size-hole drilled to 207 ft. where 13-3/8" surface casing was run and cemented to the surface on January 21st.

No attempt will be made in this report to define cores or geology, which will appear on our Paleontologist Ben Daleon's report.

One day was allowed for the surface casing cement to set. On January 22nd drilling was resumed with 12-1/4" bit; this size-hole was carried to 2542 ft. At 2,000 ft. the Homco Sidewall Sampler was run and cores taken back to 1053 ft., the upper contact of the Tarao section. At 2542 ft. the hole was reduced to 11" and carried to 3900 ft. with intermittent sampling back. At this depth a Reed, 8-1/4", Conventional Core Barrel was run and conventional cores were taken through the contact of Tarao and Singit which occurred at 4179 ft. Conventional cores were carried on to 4231 ft. where drilling was resumed with 8-3/8" drill bits.

On February 11, 1953 our After Main Engine was found to be leaking excessive water in the Crankcase past the cylinder liner seals, and it was considered advisable to cut the engine out and repair same. This consumed 8 days, and drilling was again resumed on February 19th.

At 5990 ft. the Reed Conventional Core Barrel was again run to check our position on structure and continued to 6018 ft. The core dips being flat proved us to be still in position on the seismic anomaly which only recorded to 1250 meters or 4100 ft., approximately 1900 ft. higher. Drilling was again resumed and carried on to 6354 ft., which was reached on February 22nd. At this depth, sidewall coring back was started and taken up to 6200 ft. where mechanical trouble was encountered with the Homco Tool. This was corrected and a bit was run to clean out shale and gravel which had accumulated in the hole. During this process a partial new mud system was applied to the well. The bit pulled and the Homco Core Tool was again run on February 25th. At 4:00 A. M., just before sampling was resumed starting at 6200 ft., a hot salt water flow entered the hole probably from the 2,000 ft. level approximately, and 850 sacks of our stock of 1,400 sacks of Baroid Weight Material was con-

sumed in bringing it under control. This was done at 9:00 A. M. on February 25th. During this process the Blow-out Preventers (B.O.P.) were closed and circulation broke out under the derrick floor in two places approximately 10 and 15 ft. away from the well surface casing.

This left us in the position of not having enough weight material to kill the water flow should it occur again, and hardly enough to carry on drilling, as the hole was taking a reasonable amount of fluid which had to be supplemented from our limited stock of baroid on hand of approximately 550 sacks.

Under these circumstances, to avoid the possibility of our well getting out of control with insufficient baroid to kill again, and as circulation broke through to the surface around our protective surface casing, it was my recommendation that the hole be cemented and no chance taken on a heavy flow of hot salt water cratering out around our derrick and flooding the local fresh water creek and ponds used for irrigation in the vicinity.

This was approved and blank drill pipe was run to 800 ft., and 500 sacks of cement mixed and pumped down and back up to 157 ft. as located by a bailer the following day. One more day was allowed for the cement to set hard, and on February 28th, the cement in the hole took the weight of the drill pipe at 164 ft., 42 ft. up in our 13-3/8" casing. Later, an 18 ft. bridge plug was put in at the top and a plate welded over the hole.

CONCLUSION. In drilling the hole, one (1) Re-run 18" bit was used to 207 ft; three (3) 12-1/4" bits to 2542 ft. from 207 ft.; three (3) 11" bits to 3,900 ft. from 2542 ft.; four (4) 8-1/4" Reed core bits from 3900 to 4231 ft.; and six (6) 8-3/8" bits to 6354 ft. Two hundred and six (206) sidewall cores were taken at various intervals and thirty-eight (38) convention cores, likewise. Only six (6) tons of our 24 tons of Aquagel were expended, and approximately 850 sacks of Baroid. The major portion of our last shipment of supplies is still intact having used mostly old stock left over from previous operations.

Thirty-three (33) days were consumed in drilling operations — from January 20th to February 22nd, when depth was reached at 6354 ft.—with 8 days out for engine repair and one day cement time on surface casing, making 24 days actual drilling and coring time.

(Sgd.) E. F. RICHARDS

Manila, March 3rd 1953.

A BRIEF SUMMARY OF THE GEOLOGY OF

P.D.J.V. OTON NO. 1 WELL

INTRODUCTION — The hole was spudded at 4,200 meters due north of kilometer post No. 16 along the national highway from Iloilo City to Tigbauan on the southern coast of Panay Island. It was located on the apex of the Oton Anticline.

SUB-SURFACE GEOLOGY — Flat dips found on the conventional wireline core samples from the well confirmed the existence of a symmetrical, domal anticline penetrated by the drill bit at its apex.

MICRO-PALEONTOLOGY — Samples from the well yielded abundant micro-fossils, predominantly foraminifera, comparable to the fauna of the original biostratigraphic standard type section on the outcrops toward the western foothills. The same fossiliferous highly organic, marine sediments formed the matrix for the micro-fossils of the bore-hole samples.

STRATIGRAPHY — The drill bit penetrated the following formations, thus:

Date	Depth	Formation	Age
Jan. 20, 1953	0'—50'	Alluvium	Quaternary
" 21 "	50'—150'	Cabatuan	Tertiary Upper Z
" 22-24 "	150'—1220'	Ulian	" Lower Z
" 25 "	1220'—2240'	Iday	Tertiary Y
" 26-Feb. 3	2240'—4179'	Tarao	Tertiary X
Feb. 4-23, 1953	4179'—6354'	Singit	Tertiary W

The Basement Complex was not reached by the drill bit, but the presence of basalt pebbles in the ditch samples from bottom indicated that we were approaching basement.

A total of 206 Homco Side-Wall core samples were taken during the operation. Ditch samples were also taken from the shakers every ten feet of hole drilled, giving a total of 635 samples. In addition to these, 38 conventional wireline core samples were taken from 3900' to 4231' and 5990' to 6018'. However, cores were not taken from depth intervals: 0'-1052'; 1294'-1956'; 1998'-2199'; 3081'-3899'; 4232'-4306'; 5229'-5989', and 6020'-6199'.

OIL AND GAS SHOWINGS — Indications of gas were observed during the openings of the core barrels from depth intervals: 3926'-36'; 3971'-81'; 4016'-26'; 4061'-81'; 4131'-41'; 4171'-91'; 4192'-4201'; 4221'-31'; 4271'-81', and 6009'-6019'.

Positive cuts with acetone were also obtained from the Homco Side-Wall core

samples taken from the following depths: 4467'; 4457'; 4447'; 4327'; 4317'; 5228'; 5223'; 5208'; 5198'; 5188'; 5178'; 5168'; 5158'; 5148'; 5138'; 5128'; 5118'; 5108'; 5098'; 5088'; 5078'; 5068'; 5058'; 5048'; 4738'; 4638'; 6340'; 6260' and 6240'.

While drilling through depths 4540', 4830', and 5030', evidence of oil was observed on the ditch.

Both the Tarao and Singit Formations showed numerous alternations of stratified and impervious beds.

Three Homco Side-Wall core samples obtained from a coralline lime and shale bed of the Singit Formation at depths 5188', 5148', and 5128' were sent to California for core analysis. All showed excellent porosity and permeability, but practically no oil saturation.

(Sgd.) BENJAMIN A. DALEON

PETROLEUM TECHNOLOGISTS, INC.

PRODUCTION RESEARCH — CORE ANALYSIS
PETROLEUM, PRODUCTION AND
RESERVOIR ENGINEERING

868 TRUCKWAY
MONTEBELLO, CALIFORNIA

NORRIS JOHNSTON
President

N. VAN WINGEN
Vice-President

February 18, 1953

Mr. K. M. Henderson
Kern Drilling Company
2875 Cherry Avenue
Long Beach, California

Dear Mr. Henderson:

Herewith is the analysis of the 3 cores you brought in February 17, from Panay Drilling Joint Venture well Oton # 1 in the depth interval 5118—5188.

This analysis indicates good porosity and permeability, but practically no oil content. It is well known that sidewall samples are taken in a region where drilling mud filtrate invasion has been a maximum, but in no case could this flushing action reduce the oil saturation to 1% of the pore space. Thus these cores do not indicate a commercial oil accumulation. The total saturation is not low enough to indicate good gas production. The flushing would tend to increase the apparent total saturation on receipt at the laboratory, but even with this consideration, I would hardly be able to interpret these total saturations as predicting commercial gas production.

Sincerely yours,

(Sgd.) NORRIS JOHNSTON

CORE ANALYSIS REPORT

Field: Panay, Philippines
Well: Oton #1
Oil: 30° API (Est.)
Core: Homco Sidewall

Depth	% Porosity	Md. Air Permeability	O/W Ratio	Saturation of Pore Space			Formation Factor	Salinity as NaCl	
				% Oil	% Water	Tot. Liq.		ppm	gpg
5118	34.4	1441	0	0	76.8	76.8	9.3	2120	124
5138	34.0	245	.01	.9	86.2	87.1	10.1	1085	64
5188	31.5	304	.01	1.0	74.0	75.0	12.1	4700	275